

Confirmation No. 6063

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	AMTMANN	Examiner:	Khan, Omer
Serial No.:	10/562,244	Group Art Unit:	2612
Filed:	December 22, 2005	Docket No.:	AT030034US1 (NXPS.610PA)
Title:	METHOD OF MAKING AN INVENTORY OF TRANSPONDERS IN A COMMUNICATION STATION		

---

**APPEAL BRIEF**

Mail Stop Appeal Brief-Patents  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Customer No. <b>65913</b>
------------------------------

Dear Sir:

This Appeal Brief is submitted pursuant to 37 C.F.R. §41.37, in support of the Notice of Appeal filed January 21, 2010 and in response to the rejections of claims 1-11 as set forth in the Final Office Action dated September 25, 2009.

**Please charge Deposit Account No. 50-4019 (AT030034US1) \$540.00** for filing this brief in support of an appeal as set forth in 37 C.F.R. §1.17(c). If necessary, authority is given to charge/credit Deposit Account 50-4019 additional fees/overages in support of this filing.

**I. Real Party In Interest**

The real party in interest is NXP Semiconductors. The application is presently assigned of record, at reel/frame nos. 019719/0843 to NXP, B.V., headquartered in Eindhoven, the Netherlands.

**II. Related Appeals and Interferences**

While Appellant is aware of other pending applications owned by the above-identified Assignee, Appellant is unaware of any related appeals, interferences or judicial proceedings that would have a bearing on the Board's decision in the instant appeal.

**III. Status of Claims**

Claims 1-11 stand rejected and are presented for appeal. A complete listing of the claims under appeal is provided in an Appendix to this Brief.

**IV. Status of Amendments**

An amendment to the drawings was filed March 22, 2010 to address a form matter as requested by the Examiner. This amendment also included a minor amendment to the Specification for consistency with the drawings.

**V. Summary of Claimed Subject Matter**

As required by 37 C.F.R. § 41.37(c)(1)(v), a concise explanation of the subject matter defined in the independent claims involved in the appeal is provided herein. Appellant notes that representative subject matter is identified for these claims; however, the abundance of supporting subject matter in the application prohibits identifying all textual and diagrammatic references to each claimed recitation. Appellant thus submits that other application subject matter, which supports the claims but is not specifically identified above, may be found elsewhere in the application. Appellant further notes that this summary does not provide an exhaustive or exclusive view of the present subject matter, and Appellant refers to the appended claims and their legal equivalents for a complete statement of the invention.

Commensurate with independent claim 1, an example embodiment of the present invention is directed to a method of placing a transponder or an integrated circuit contained in the transponder in an inventory in a communication station (*see, e.g.*, integrated circuit 2 and transponder 1 shown in Fig. 1 and page 6:7-33), the method comprising: activating an inventory-making process in the transponder or in its integrated circuit (*see, e.g.*, page 8:8-14); generating a hash value in the transponder or its integrated circuit, the hash value identifying a part of a distinguishing dataset that is stored in the transponder or its integrated circuit, the distinguishing dataset being characteristic for the transponder or its integrated circuit (*see, e.g.*, page 11:11-25); using the hash value, accessing the part of the distinguishing dataset (*see, e.g.*, page 11:23-31); selecting a transmission parameter from a set of transmission parameters by using the accessed part from the distinguishing dataset (*see, e.g.*, page 11:25 to page 12:21); and using the selected transmission parameter, transmitting an identifying dataset for the transponder or its integrated circuit to the communication station to place the transponder or its integrated circuit in the inventory in the communication station, the identifying dataset being characteristic for the transponder or its integrated circuit and intended for the placing of the transponder or its integrated circuit in an inventory (*see, e.g.*, page 12:21-32).

Commensurate with independent claim 6, an example embodiment of the present invention is directed to an integrated circuit for a transponder (*see, e.g.*, integrated circuit 2 and transponder 1 shown in Fig. 1 and page 6:7-33), the integrated circuit comprising: process-controlling circuitry configured to control an inventory-making process for placing the integrated circuit or the transponder containing the integrated circuit in an inventory in a communication station (*see, e.g.*, process-controlling circuit 14 shown in Fig. 1 and page 8:8-14); a memory circuit configured to store a distinguishing dataset of the integrated circuit or the transponder, the distinguishing dataset being characteristic for the integrated circuit or the transponder, and to store an identifying dataset of the integrated circuit or the transponder, the identifying dataset being characteristic for the integrated circuit or the transponder and intended for placing the integrated circuit or the transponder containing the

integrated circuit in an inventory (*see, e.g.*, storage 16 shown in Fig. 1 and page 8:14-32); a hash-value generating circuit configured to generate a hash value that identifies a part of the distinguishing dataset stored in the memory circuit (*see, e.g.*, hash value counting stage 20 shown in Fig. 1 and page 11:11-25); transmission-parameter selecting means for receiving the part of the distinguishing dataset that is read from the memory circuit using the hash value and for calculating a transmission parameter from a set of transmission parameters using the part of the distinguishing dataset (*see, e.g.*, time slot calculating stage 17, time slot counting stage 18, and comparator 19 shown in Fig. 1 and page 11:25 to page 12:21); and transmission circuitry configured to use the selected transmission parameter to transmit the identifying dataset from the integrated circuit to the communication station to place the integrated circuit or the transponder containing the integrated circuit in the inventory in the communication station (*see, e.g.*, transmission coil 3, modulating circuit 11 and encoding circuit 29 shown in Fig. 1 and page 12:21-32).

## **VI. Grounds of Rejection to be Reviewed Upon Appeal**

The grounds of rejection to be reviewed on appeal are as follows:

Claims 1-11 stand rejected under 35 U.S.C. § 103(a) over Cato (U.S. Patent No. 5,539,394) in view of Pavesi (U.S. Patent No. 6,549,536).

## **VII. Argument**

### **1. The Cited References Fail To Disclose Claim Limitations Directed To Generating A Hash Value In A Transponder And Using The Hash Value To Access A Distinguishing Dataset Stored In The Transponder.**

The cited combination of references lacks correspondence to the claimed invention. For example, neither of the asserted references teaches the claimed invention “as a whole” (§ 103(a)) including aspects regarding, *e.g.*, generating a hash value in a transponder, the hash value identifying a part of a distinguishing dataset that is also stored in a transponder, and using the hash value to access the (stored) part of the distinguishing dataset. Because neither reference teaches these aspects, no reasonable

combination of these references can provide correspondence to the claimed invention. As such, the § 103 rejection fails.

More specifically, the record is clear that the cited hashing number of the '394 reference does not correspond to Appellant's hash value, which is used to access a part of the distinguishing dataset (*e.g.*, a serial number) with the accessed part then being used to calculate a transmission parameter (*e.g.*, a time slot). The Examiner has offered no substantive rebuttal of Appellant's arguments regarding the clear lack of correspondence between the hashing number of the '394 reference and Appellant's hash value, as well as the use thereof. As such, Appellant submits that the record stands uncontroverted regarding the lack of correspondence between the '394 reference and the claimed invention.

For example, the hashing number of the '394 reference is not (and cannot be) used to access a part of a distinguishing dataset stored in a tag, with the accessed part then being used to calculate a transmission parameter, as claimed. Instead, the cited hashing number of the '394 reference calculated in the tag (using a hashing base number) is the time slot in which the tag will transmit. *See, e.g.*, Col. 5:29-55. As such, the hashing number of the '394 reference does not identify a part of the distinguishing dataset that is stored in the tag and the hashing number of the '394 reference is not used to access a part of such a distinguishing dataset, as in the claimed invention.

The '394 reference thus does not teach generating a hash value in the transponder, using the generated hash value to access a part of the distinguishing dataset stored in the transponder, and then using the accessed part to determine the time slot, as claimed. Instead, the '394 reference divides the tag's serial number by the hashing base number (provided by the reader) to determine the hashing number which is the time slot in which the tag will transmit its serial number to the reader. *See, e.g.*, Col. 5:48-55. Appellant submits that the cited portions of the '536 reference fail to address the above discussed shortcomings of the '394 reference. In particular, the '536 reference does not teach generating a hash value in a transponder (as claimed) and, in fact, the '536 reference fails to make any mention of a transponder. *See, e.g.*, Col. 3:41-

44. Thus, no reasonable combination of these references can provide correspondence to the claimed invention.

In view of the above, the § 103(a) rejection of claims 1-11 is improper and Appellant requests that it be reversed.

**2. The Examiner's Asserted Basis To Combine The Cited References Is Contrary To The Requirements Of § 103 And Relevant Law.**

The Examiner has failed to provide any explanation as to how the seemingly unrelated teachings of the cited '394 and '536 references would (or could) be combined, and the Examiner fails to provide a valid reason why the skilled artisan would combine such unrelated teachings. Section 103(a) and relevant law recognizes that most inventions are combinations of known elements, and therefore requires significantly more than vague allegations and conclusory statements to establish obviousness. This is particularly relevant when the teachings of the primary reference are in one field (identification tags) and the teachings of the secondary reference are in a completely different field (IP routers). As recently explained by the *KSR* Court, "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known."<sup>1</sup> See also, M.P.E.P. § 2143.01 (emphasis original), iterating that "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art." Thus, it is clear that the Examiner's unsupported conclusions of feasibility and vague assertions of combinability are insufficient to sustain the § 103(a) rejection of claims 1-11.

More specifically, the Examiner's error lies in the assertion that the skilled artisan would combine teachings of the '536 reference relating to an IP router with the identification tags of the '394 reference to "reduce the chance of collision." However, no explanation has been provided as to how the proposed combination would function in any

---

<sup>1</sup> *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-419 (2007)

manner, much less how to reduce such a chance. Such a vague reference to a hypothetical combination, for which no explanation is presented by the Examiner, does not provide a clearly-articulated reason that would be consistent with the M.P.E.P. and relevant law (*see, e.g., KSR* at 418-419, cited above). Unlike *KSR*, in which the combination at hand involved combining “two known devices according to their established functions,” the Examiner’s proposed combination instead involves an unexplained combination in which an identification tag is modified using aspects taken from an IP router. These disparate applications do not lend themselves to a simple combination in which the elements simply perform the same function, and the Examiner has not articulated any explanation beyond simply identifying elements and concluding that one would somehow arrive at an obvious and advantageous combination.

To further explain, the ‘536 reference fails to make any mention of the tags 10 taught by the ‘394 reference or of using a computed hash value to look up an identifier stored in the apparently nonexistent tags. Instead, the ‘536 reference teaches that an IP router computes a hash value from an incoming identifier, with the computed hash value pointing to a hash table that corresponds to one or more out-coming identifiers for devices attached to the router. *See, e.g., Col. 3:4-52*. In this context, the hash value of the ‘536 reference is not generated in a tag, the hash value does not identify any data stored in the tag, the hash value is not used to access data stored in the tag, and the hash value is not used in any manner to compute a time slot in which the tag communicates with a reader, as in the claimed invention. At best, the Examiner’s combination would involve (extensively) modifying the cited teachings of the ‘394 reference in some as yet unidentified manner. Accordingly, the Examiner’s assertion of such a vague “articulated reasoning” (*e.g., to “reduce the chance of collision”*) in support of the modification is insufficient. *KSR* and M.P.E.P. § 2141 make it clear that such assertions are inapplicable where the operation of one of the references is modified. *See, e.g., KSR* at 418-419. For example, according to M.P.E.P. § 2141, Appellant can rebut such assertions of obviousness simply by showing that “the elements in combination do not merely perform the function that each element performs separately.” This is also consistent with various parts of *KSR*, which repeatedly refer to combined teachings in

which the cited references are not modified in their operation. Appellant submits that, in the context of *KSR*, the asserted combination “as a whole” is entirely unpredictable based on the asserted teachings of the ‘394 and ‘536 references. Thus, the Examiner’s legal conclusion of obviousness cannot be maintained in view of the evidence of record.

The Examiner has also failed to present any evidence that the alleged benefit (*i.e.*, to “reduce the chance of collision”) would result from the proposed combination. The ‘394 reference loads a unique identification into each of the tags and each of the tags uses its unique identification to calculate a time slot in which it will communicate with the reader. *See, e.g.*, Col. 3:31-43. As such, the tags of the ‘394 reference each already use a unique time slot to communicate with the reader. *See, e.g.*, claims 4, 11 and 15 of the ‘394 reference. Appellant submits that the ‘394 reference already addresses the problem of collisions through the use of unique time slots. As such, the Examiner has failed to present any evidence that the proposed combination would reduce the chance of collision in the ‘394 reference. In the absence of a nexus between the alleged advantage and the hypothetical combination, the alleged advantage is immaterial to the obviousness of the rejection.

In view of the above, the § 103(a) rejection of claims 1-11 is improper and Appellant requests that it be reversed.

### **3. The ‘394 Reference Teaches Away From The Proposed Combination.**

The Examiner’s proposed modification of the ‘394 reference is improper because the ‘394 reference teaches away from using its hashing number to access a part of a distinguishing dataset stored in a tag, and further using the accessed part to calculate a transmission parameter (*e.g.*, a time slot) for the tag. Consistent with the above-cited *KSR* decision, M.P.E.P. § 2143.01 explains the long-standing principle that a §103 rejection cannot be maintained when the asserted modification undermines either the operation or the purpose of the main (‘394) reference - the rationale being that the prior art teaches away from such a modification. *See KSR* at 418-419 (2007), reciting that “when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious.”



In this instance, the '394 reference divides the tag's serial number by a hashing base number (provided by the reader) to determine a hashing number, which is the time slot in which the tag will transmit its serial number to the reader. *See, e.g.*, Col. 5:48-55. As the tag of the '394 reference has already determined its time slot, the '394 reference teaches away from the additional steps of using the hashing number to access a part of a distinguishing dataset stored in the tag and then using the accessed part to calculate a time slot for the tag. Appellant submits that the skilled artisan would not add these additional unnecessary steps to the '394 reference because the '394 reference has already determined the tag's time slot. Accordingly, the '394 reference teaches away from the Examiner's proposed modification and there is no motivation for the skilled artisan to modify the '394 reference in such a manner.

In view of the above, the § 103(a) rejection of claims 1-11 is improper and Appellant requests that it be reversed.

### **VIII. Conclusion**

In view of the above, Appellant submits that the rejections of claims 1-11 are improper and therefore requests reversal of the rejections as applied to the appealed claims and allowance of the entire application.

Authority to charge the undersigned's deposit account was provided on the first page of this brief.

*Please direct all correspondence to:*

Corporate Patent Counsel  
NXP Intellectual Property & Standards  
1109 McKay Drive; Mail Stop SJ41  
San Jose, CA 95131

CUSTOMER NO. 65913

By: 

Robert J. Crawford  
Reg. No.: 32,122  
Eric J. Curtin  
Reg. No.: 60,145  
651-686-6633  
(NXPS.610PA)

**APPENDIX OF CLAIMS INVOLVED IN THE APPEAL**  
(S/N 10/562,244)

1. A method of placing a transponder or an integrated circuit contained in the transponder in an inventory in a communication station, the method comprising:
  - activating an inventory-making process in the transponder or in its integrated circuit;
  - generating a hash value in the transponder or its integrated circuit, the hash value identifying a part of a distinguishing dataset that is stored in the transponder or its integrated circuit, the distinguishing dataset being characteristic for the transponder or its integrated circuit;
  - using the hash value, accessing the part of the distinguishing dataset;
  - selecting a transmission parameter from a set of transmission parameters by using the accessed part from the distinguishing dataset; and
  - using the selected transmission parameter, transmitting an identifying dataset for the transponder or its integrated circuit to the communication station to place the transponder or its integrated circuit in the inventory in the communication station, the identifying dataset being characteristic for the transponder or its integrated circuit and intended for the placing of the transponder or its integrated circuit in an inventory.
2. A method as claimed in claim 1, characterized in that, in the inventory-making process, a time slot is selected from a time-slot sequence by using the accessed part of the distinguishing dataset, and in that, in the inventory-making process, the identifying dataset for the transponder or its integrated circuit is transmitted from the transponder or its integrated circuit to the communication station by using the selected time slot.
3. A method as claimed in claim 1, characterized in that the hash value is generated by means of a hash-value counting stage provided in the transponder or in its integrated circuit.
4. A method as claimed in claim 3, characterized in that the hash-value counting

stage is set to a preset starting hash value after a power-on reset in the transponder or in its integrated circuit.

5. A method as claimed in claim 1, characterized in that the hash value is generated by means of a random number generator provided in the transponder or in its integrated circuit.

6. An integrated circuit for a transponder, the integrated circuit comprising:

process-controlling circuitry configured to control an inventory-making process for placing the integrated circuit or the transponder containing the integrated circuit in an inventory in a communication station;

a memory circuit configured to store a distinguishing dataset of the integrated circuit or the transponder, the distinguishing dataset being characteristic for the integrated circuit or the transponder, and to store an identifying dataset of the integrated circuit or the transponder, the identifying dataset being characteristic for the integrated circuit or the transponder and intended for placing the integrated circuit or the transponder containing the integrated circuit in an inventory;

a hash-value generating circuit configured to generate a hash value that identifies a part of the distinguishing dataset stored in the memory circuit;

transmission-parameter selecting means for receiving the part of the distinguishing dataset that is read from the memory circuit using the hash value and for calculating a transmission parameter from a set of transmission parameters using the part of the distinguishing dataset; and

transmission circuitry configured to use the selected transmission parameter to transmit the identifying dataset from the integrated circuit to the communication station to place the integrated circuit or the transponder containing the integrated circuit in the inventory in the communication station.

7. A circuit as claimed in claim 6, characterized in that the transmission-parameter selecting means includes a time-slot selecting stage that is configured to select a time slot

from a time-slot sequence, and the transmission circuitry configured to transmit the identifying dataset during the selected time slot from the integrated circuit to the communication station for the placing of the integrated circuit or the transponder containing the integrated circuit in an inventory.

8. A circuit as claimed in claim 6, characterized in that the hash-value generating circuit includes a hash-value counting stage.
9. A circuit as claimed in claim 8, further comprising a power-on-reset circuit configured to generate a power-on-reset signal at a power-on reset of the integrated circuit and to provide the power-on-reset signal to the hash-value counting stage to set the hash-value counting stage to a starting hash value.
10. A circuit as claimed in claim 9, further comprising a random number generator configured to generate the starting hash value.
11. A transponder comprising:
  - an integrated circuit as claimed in claim 6; and
  - a transmission coil connected to the integrated circuit.

## **APPENDIX OF EVIDENCE**

Appellant is unaware of any evidence submitted in this application pursuant to 37 C.F.R. §§ 1.130, 1.131, and 1.132.

## **APPENDIX OF RELATED PROCEEDINGS**

As stated in Section II above, Appellant is unaware of any related appeals, interferences or judicial proceedings.